ACC.13
62nd Annual Scientific Session & Expo
TCT@ACC-i2

E1875
JACC March 12, 2013
Volume 61, Issue 10

TCT@ACC-i2: Invasive and Interventional Cardiology

EVALUATION OF MICRO CORONARY EDGE DISSECTION AND CORONARY ARTERY PLAQUE PROLAPSE POST CORONARY ARTERY PERCUTANEOUS INTERVENTION USING OPTICAL COHERENCE TOMOGRAPHY

Oral Contributions
West, Room 2004
Monday, March 11, 2013, 8:15 a.m.-8:25 a.m.

Session Title: Intravascular Imaging: Focus on OCT
Abstract Category: 38. TCT@ACC-i2: Intravascular Imaging and Physiology
Presentation Number: 2912-3

Authors: *Dusan A. Stanojevic, Suresh Sharma, Vinodh Jeevanantham, Bassem Chehab, Matthew McCullough, Peter Tadros, Buddhadeb Dawn, Mark Wiley, University of Kansas Medical Center, Kansas City, KS, USA*

Background: Prevalence, characterization and clinical relevance of intimal micro edge dissection (IMED) and Plaque Prolapse (PP) post Percutaneous Intervention (PCI) utilizing Optical Coherence Tomography (OCT).

Methods: Retrospective review of 185 OCT studies performed post PCI were reviewed by two independent observers who were screening for presence of IMED or PP that was not visible angiographycally. Micro edge dissection was defined as disruption of the luminal vessel or plaque surface in the edge segments (within 10 mm of the stent edges). IMED was graded as mild (superficial intimal tear), moderate (subintimal involvement), and severe (split of media). PP is defined as prolapse of tissue between stent struts, without disruption of the luminal vessel surface, with severity graded from 1 to 4 based on number of quadrants involved. The severity of tissue protrusion was assessed based on the volume as mild, moderate and severe.

Results: 42.2% of studies revealed presence of IMED. Proximal edge dissection was identified in 13 %. Distal edge dissection noted in 21.6%. 7.6% patients had both proximal edge dissection & distal edge dissection. 20% of edge dissections were graded mild, 14.1% as moderate and 8.1% as severe. 42.8% of IMED received additional intervention (88% post dilatation, 12% stent). 79.5% of the studies revealed some evidence of PP; including grade 1 in 17.3%, grade 2 in 17.3 %, grade 3 in 22.2% & grade 4 in 22.7%. Further characterization of PP classified 40.5% as mild, 28.1% as moderate and 10.8% as severe PP. 48.8 % of PP received additional intervention (92 % post dilatation, 8 % stent). There was no statistically significant difference in clinical outcomes (Acute coronary syndrome and/or death) at 1 month and 6 months follow up in patients with any IMED or no IMED (13.7% vs. 12.5% at 1 month, 9.3% vs. 9.1% at 6 months , P = 0.80).

Conclusion: We observed high prevalence of IMED and PP on OCT studies done post PCI. However, in absence of any high risk features associated with angiography, OCT finding of IMED was not associated with significantly worse clinic outcomes at 1 month and 6 months follow up. Larger prospective studies with long term follow up are needed for further validation of these results.